

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P486972

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-2LO-27-120-EDD-90**

Issue Date: 3/1/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P486972
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35357)
Test Lab: INNOVATION CENTER
Issue Date: 3/1/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-89BC-LD4-2LO-27-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

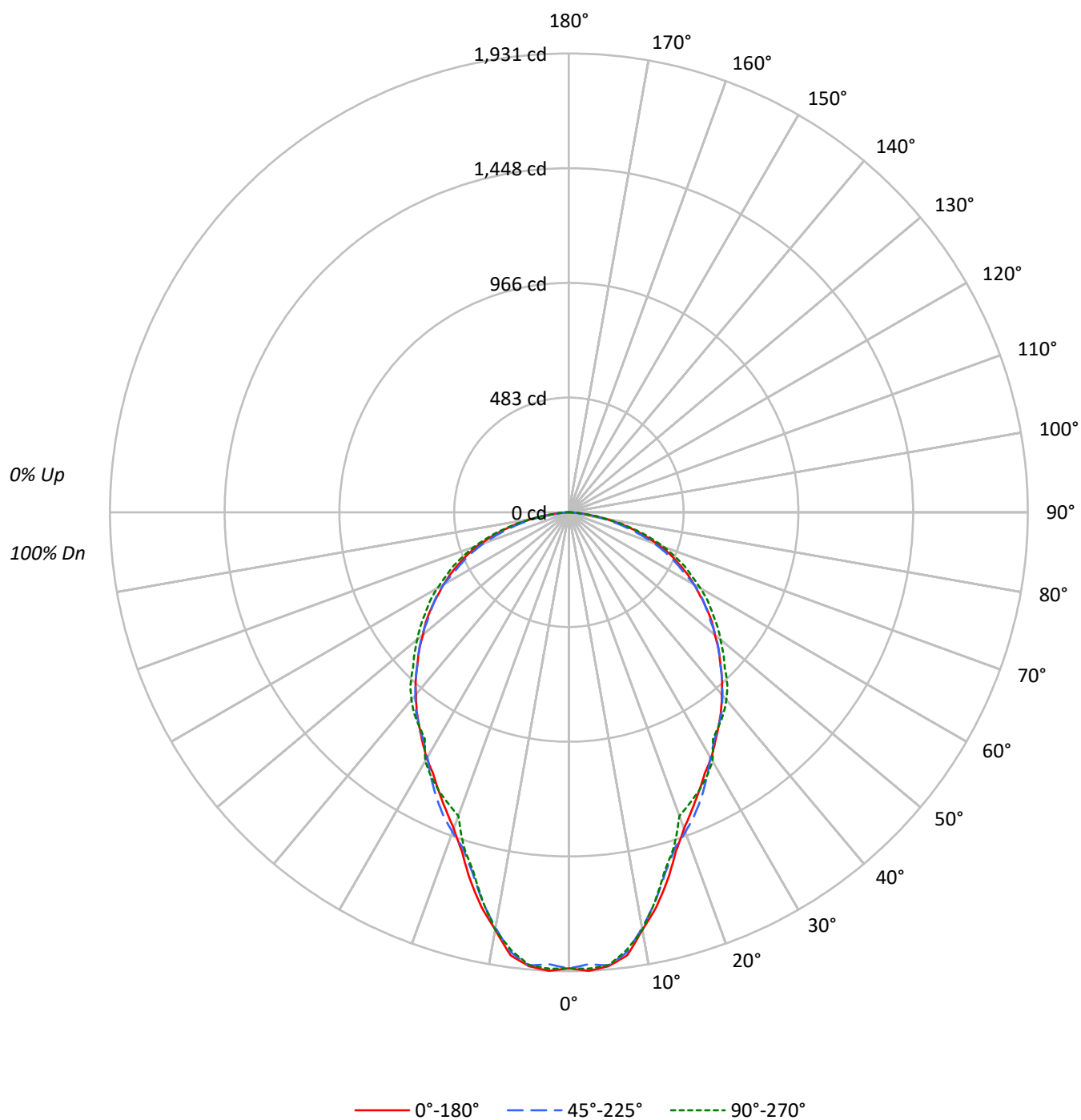
Lumens per Lamp: N/A
Luminaire Lumens: 4104.8 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84		
2	99	91	84	79	97	89	83	78	86	81	76	82	78	74	79	76	73	70		
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60		
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51		
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45		
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39		
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35		
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31		
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	35	30	28		
10	54	41	33	28	53	40	33	28	40	33	28	39	32	28	38	32	28	26		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2583	2583	2583
5°	2590	2586	2583
10°	2437	2426	2435
15°	2233	2184	2172
20°	2028	2051	1946
25°	1923	1962	1920
30°	1858	1850	1878
35°	1803	1803	1803
40°	1758	1765	1809
45°	1715	1713	1766
50°	1678	1690	1742
55°	1660	1653	1728
60°	1638	1636	1719
65°	1617	1567	1710
70°	1586	1496	1665
75°	1469	1328	1541
80°	1191	1082	1222
85°	755	678	662



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.3	4.3
10°-20°	445.7	10.9
20°-30°	601.9	14.7
30°-40°	689.2	16.8
40°-50°	706.0	17.2
50°-60°	640.6	15.6
60°-70°	500.0	12.2
70°-80°	283.6	6.9
80°-90°	59.5	1.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1225.8	29.9
0°-40°	1915.1	46.7
0°-60°	3261.7	79.5
0°-90°	4104.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4104.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1919	1919	1919	1919	1919	
5°	1917	1895	1914	1918	1912	179
15°	1603	1608	1568	1576	1559	448
25°	1296	1312	1322	1290	1294	598
35°	1098	1100	1098	1099	1098	688
45°	901	908	900	937	928	697
55°	708	707	705	730	737	632
65°	508	497	492	515	537	503
75°	282	262	256	270	296	296
85°	49	44	44	41	43	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1919.4	1919.4	1919.4	1919.4	1919.4
2.5°	1931.3	1916.4	1903.4	1924.4	1922.4
5°	1917.4	1895.4	1914.4	1918.4	1912.4
7.5°	1880.4	1866.5	1867.5	1859.5	1858.5
10°	1783.6	1791.6	1775.6	1789.6	1782.6
12.5°	1700.8	1705.8	1677.8	1683.8	1675.8
15°	1603.0	1608.0	1568.0	1576.0	1559.1
17.5°	1496.2	1514.1	1481.2	1491.2	1473.2
20°	1416.3	1431.3	1432.3	1416.3	1359.4
22.5°	1353.4	1368.4	1380.4	1332.5	1326.5
25°	1295.6	1312.5	1321.5	1289.6	1293.6
27.5°	1237.7	1256.6	1256.6	1263.6	1254.6
30°	1195.7	1203.7	1190.7	1216.7	1208.7
32.5°	1145.8	1148.8	1137.8	1156.8	1128.9
35°	1097.9	1099.9	1097.9	1098.9	1097.9
37.5°	1052.0	1047.0	1056.0	1050.0	1069.0
40°	1001.1	1001.1	1005.1	1015.1	1030.1
42.5°	954.2	958.2	953.2	981.1	987.1
45°	901.3	908.3	900.3	937.2	928.2
47.5°	853.4	856.4	854.4	879.3	881.3
50°	801.5	805.5	807.5	829.4	832.4
52.5°	758.6	757.6	750.6	782.5	787.5
55°	707.7	706.7	704.7	729.6	736.6
57.5°	655.8	656.8	661.7	675.7	692.7
60°	608.8	603.9	607.9	624.8	638.8
62.5°	560.9	552.0	543.0	570.9	583.9
65°	508.0	497.1	492.1	515.0	537.0
67.5°	459.1	441.2	438.2	454.1	480.1
70°	403.2	381.3	380.3	392.3	423.2
72.5°	341.4	322.4	317.4	333.4	361.3
75°	282.5	261.5	255.5	270.5	296.4
77.5°	218.6	201.6	197.6	205.6	226.6
80°	153.7	143.7	139.7	142.7	157.7
82.5°	96.8	89.8	87.8	86.8	94.8
85°	48.9	43.9	43.9	40.9	42.9
87.5°	15.0	14.0	13.0	10.0	11.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)